Goddard Procedural Requirements (GPR)

DIRECTIVE NO.	GPR 5340.2K	**APPROVED BY Signature:**	*Original Signed By*
EFFECTIVE DATE:	April 9, 2013	**NAME:**	Judith N. Bruner
EXPIRATION DATE:	April 9, 2018	**TITLE:**	Director, Safety and Mission Assurance

COMPLIANCE IS MANDATORY

Responsible Office: Code 302/Institutional Support Office

Title: Documentation and Control of Process Nonconformances and Customer Complaints

PREFACE

P.1   PURPOSE

This directive defines the documentation and control of Goddard Space Flight Center (GSFC) process nonconformances (NCs), customer complaints and their respective Corrective/Preventive Actions (CA/PA), in accordance with Goddard Policy Directive (GPD) 8730.1, Goddard Problem Reporting Policy for Processes, Products and Safety.

P.2   APPLICABILITY

This directive applies to process NCs and customer complaints that are within the scope of the GSFC Management System (MS) in accordance with Goddard Procedural Requirement (GPR) 1280.1, GSFC Quality Manual.

P.3   AUTHORITIES

NPD 1280.1, NASA Management System Policy
GPD 8730.1, Goddard Problem Reporting for Processes, Products and Safety

P.4   APPLICABLE DOCUMENTS

a. GPD 8730.1, Goddard Problem Reporting for Processes, Products and Safety
b. GPR 1060.3, The Goddard Governance System
c. GPR 1280.1, The GSFC Quality Manual
d. GPR 5100.4, Supplier Assessment Function
e. GPR 5330.1, Product Processing, Inspection, and Test
f. GPR 5340.4, Problem Reporting and Problem Failure Reporting
g. GPR 9980.1, Internal Audit System

P.5   CANCELLATION

a. GID 1710.1-, Corrective and Preventive Action
b. GPR 5340.2J, Control of Nonconformances
c. GPR 1710.1H, Corrective and Preventive Action

P.6   SAFETY

None

P.7   TRAINING

Assistance is available for each NC Lead (NCL) in the use of the Audit/Nonconformance Report (NCR) System and can be obtained from Code 302. Root Cause Analysis training is available online through the System for Administration, Training and Educational Resources for NASA (SATERN), course number SMA-002-10, Root Cause Analysis.

P.8   RECORDS

Record Title	Record Custodian	Retention
Nonconformance Reports	Internal Audit Coordinator, Code 302	*NRRS 1/26.5A: Recordkeeping copy (paper)/DESTROY WHEN 7 YEARS OLD

NRRS – NASA Records Retention Schedules (NPR 1441.1)

P.9   MEASUREMENT/VERIFICATION

Measurement and verification will be conducted in accordance with GPR 1280.1, The GSFC Quality Manual; GPR 9980.1, Internal Audit System; GPR 5100.4, Supplier Assessment Function and GPR 1060.3, The Goddard Governance System. Code 300 performs the following measurement and verification activities associated with this process:

1. Trend analysis, including factors such as distribution by organization, cause, and rate of closure;
2. Status of NCRs for reporting and discussion at Management System Committee meetings; and
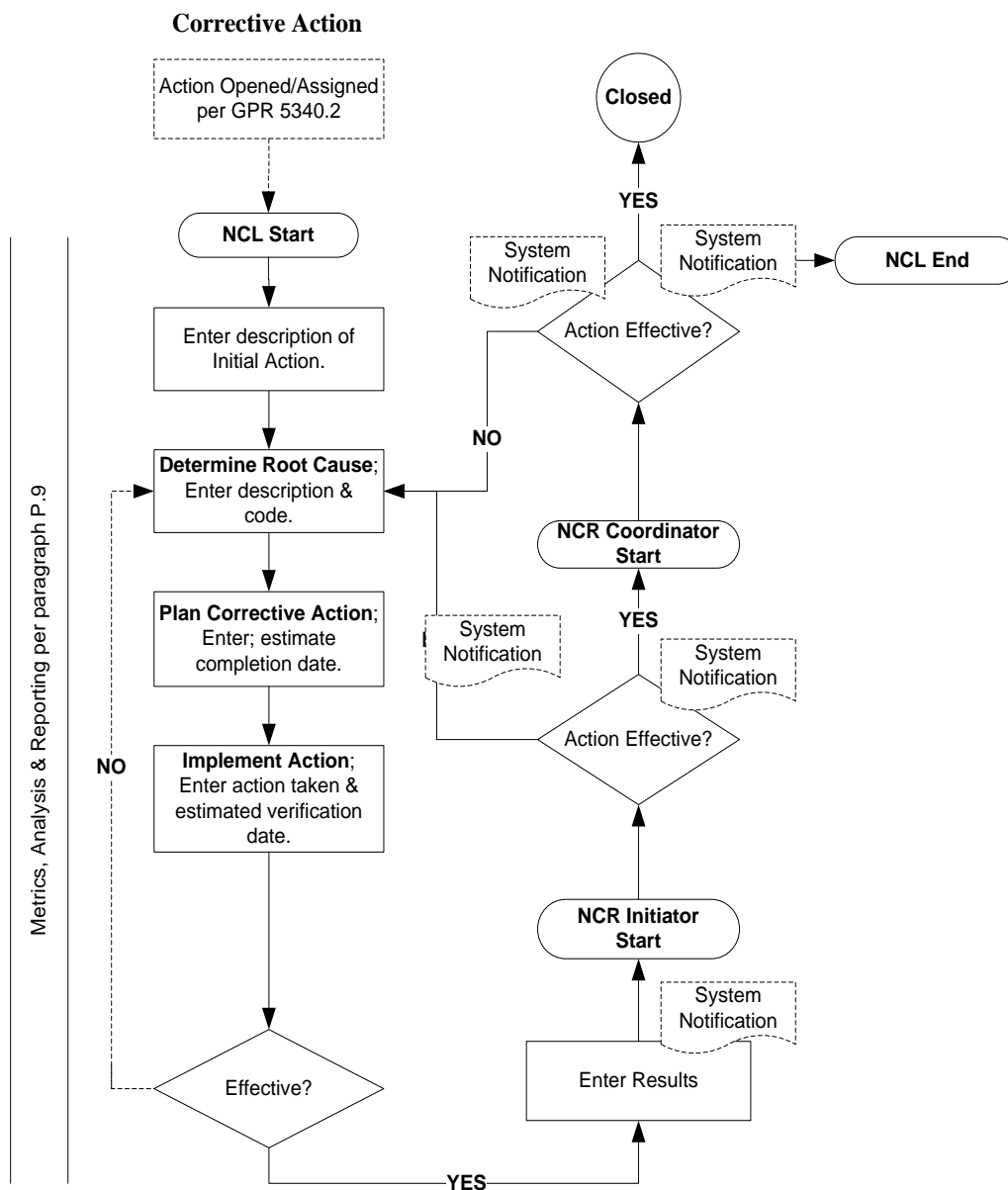3. Summary data for semi-annual management reviews.

PROCEDURES

In this document, a requirement is identified by "shall," a good practice by "should," permission by "may" or "can," expectation by "will" and descriptive material by "is."
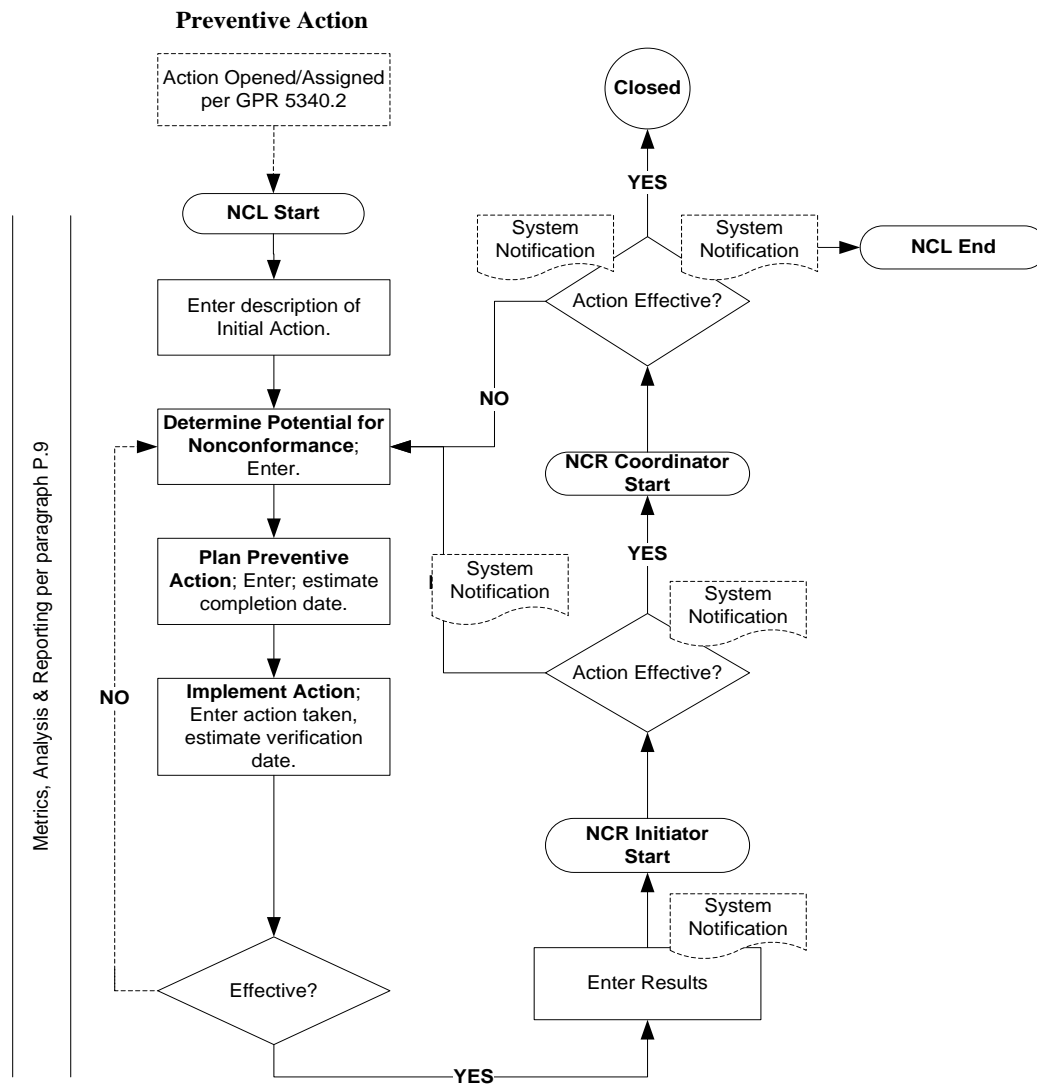
1. Process NCs, customer complaints and their respective Corrective/Preventive Actions (CA/PA) shall be documented and controlled as Nonconformance Reports (NCRs) in the Audit/NCR System.

2. NCR Initiators shall:
    a. Identify and notify the GSFC organization responsible for the NC or customer complaint;
    b. Enter the NCR into the Audit/NCR System;
    c. Ensure the NCR includes a reference to a valid requirement, a narrative description of the NC, and identifies the objective evidence, as required by the Audit/NCR System user interface; and
    d. Respond to Corrective/Preventive Actions (CA/PA) in accordance with Figures 1 and 2, respectively.

3. GSFC organizations shall:
    a. Identify NCLs;
    b. Ensure personnel have access to the Audit/NCR System. NOTE: accounts can be obtained at https://auditncr.gsfc.nasa.gov and https://idmax.nasa.gov; request access to Audit/NCR System;
    c. Ensure assigned NCLs are trained in Root Cause Analysis.

4. NCLs shall:
    a. Identify and notify stakeholders;
    b. Assess for potential impact(s) upon GSFC pre/post-launch product(s) and process in accordance with GPD 8730.1, GPR 5330.1, and 5340.4, as appropriate;
    c. Conduct CA/PA in accordance with Figures 1 and 2, respectively;
    d. Report CA/PA status in accordance with MS and organizational policy.
    NOTE: All NCLs should be knowledgeable of Root Cause Analysis (i.e. SATERN course SMA-002-10), prior to working corrective actions.

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EXPIRATION DATE: April 9, 2018

Corrective Action Process

Corrective Action

Action Opened/Assigned per GPR 5340.2

NCL Start

Enter description of Initial Action.

Determine Root Cause; Enter description & code.

Plan Corrective Action; Enter; estimate completion date.

Implement Action; Enter action taken & estimated verification date.

Effective?

Metrics, Analysis & Reporting per paragraph P.9

NO

YES

Closed

YES

System Notification

System Notification

NCL End

Action Effective?

NO

NCR Coordinator Start

YES

System Notification

System Notification

Action Effective?

NCR Initiator Start

System Notification

Enter Results

YES

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Preventive Action Process

Preventive Action

NOTE: The use/inclusion of the term "nonconformance" and any associated acronyms in relation to the Preventive Action process is utilized only for the consistency of terminology between this document and the current Audit/NCR database.

Appendix A – Definitions

A.1 **Audit/NCR System -** An interactive on-line database accessed via the GSFC MS web site, used to document and track the status of process NCRs, customer complaints and their respective CA/PA. Such NCRs are most commonly the result of findings from internal, supplier or third party audits.

A.2 **Cause** - An event or condition that results in an effect. Anything that shapes or influences the outcome.

A.3 **Corrective Action (CA).** Action taken to correct the root cause of a process nonconformance or customer complaint and the follow-up action undertaken to assess the effectiveness of the correction.

A.4 **Customer -** The recipient of a product or service provided by GSFC. For purposes of the MS, a customer is assumed to be external to NASA. NASA organizations with which GSFC transacts business are considered to be internal customers for purposes of the MS.

A.5 **Customer Complaint -** Feedback from a customer that conveys dissatisfaction with regards to GSFC product or service. NOTE: The feedback may be solicited or unsolicited and formal (letterhead) or informal (emails or similar communication).

A.6 **Intermediate Cause** - An event or condition that existed before the proximate cause, directly resulted in its occurrence and, if eliminated or modified, would have prevented the proximate cause from occurring.

A.7 **NCR Coordinator** – The GSFC civil-servant charged with the management of day-to-day Internal Audit Program activities (a.k.a, the Internal Audit Program Coordinator).

A.8 **NCR Initiator -** A GSFC civil servant or contractor who documents a nonconformance or customer complaint in the Audit/NCR System. NOTE: This includes GSFC personnel responsible for the disposition of findings from external audits.

A.9 **Nonconformance.** The failure to implement or comply with a specified process requirement.

A.10 **Nonconformance Lead (NCL) -** An individual, identified within the Audit/NCR database that has the authority to respond to project/organization nonconformance reports (NCRs), including any required corrective action approval and follow-up.

A.11 **Nonconformance Report** – The formal Audit/NCR system record of a process NC documented.

A.12 **Preventive Action (PA).** Action taken to eliminate the causes of a potential process nonconformity or customer complaint in order to prevent its occurrence.

A.13 **Process Nonconformance -** Any failure to implement, or meet, a documented policy, procedure, or process that is stated as a requirement. NOTE: Process nonconformances are most often the result of an audit (internal or external). Pre-launch product nonconformances are often the result of pre/post receipt hardware and/or software inspections and/or tests. Post-launch nonconformances are commonly referred to as anomalies. Ref. GPD 8730.1.

A.14 **Proximate Cause** - The event(s) that occurred, including any condition(s) that existed immediately before the undesired outcome, directly resulted in its occurrence and, if eliminated or modified, would have prevented the undesired outcome; also known as the direct cause(s).

A.15 **Root Cause** - An event or condition that is an organizational factor that existed before the intermediate cause and directly resulted in its occurrence (thus indirectly it caused or contributed to the proximate cause and subsequent undesired outcome) and; if eliminated or modified, would have prevented the intermediate cause from occurring, and the undesired outcome. Typically, multiple root causes contribute to an undesired outcome.

A.16 **Root Cause Analysis** - A structured evaluation method that identifies the root causes for an undesired outcome and the actions adequate to prevent recurrence. Root cause analysis should continue until organizational factors have been identified or until data are exhausted.

Appendix B – Acronyms

CA	Corrective Action
CA/PA	Corrective/Preventive Action
GID	Goddard Interim Directive
GPD	Goddard Policy Directive
GPR	Goddard Procedural Requirement
GSFC	Goddard Space Flight Center
MS	Management System
NASA	National Aeronautics and Space Administration
NC	Nonconformance
NCL	Nonconformance Lead
NCR	Nonconformance Report
NRRS	NASA Records Retention Schedules
PA	Preventive Action
SATERN	System for Administration, Training and Educational Resources for NASA

CHANGE HISTORY LOG

Revision	Effective Date	Description of Changes
Baseline	08/12/98	Initial Release
A	02/36/99	Header and footer format changes. Expanded P2 for clarity. First sentence of 2.2 revised to remove "processes" and highlight inclusion of audit NCR's in on-line system. Modified 2.4.1(a) and (b) to accommodate established NCR/CA roles. Revised 2.4.2 to address non-project associated nonconformances. Added Note to 2.4.2. Added 2.4.3(d) WOA instructions and 2.4.3(g). Revised 2.6 for clarity. Identified quality records maintenance responsibility. Form 4-31 revised to reflect design of NCR/CA database.
B	04/21/99	Updated references to new/revised GPG's. Moved and expanded records section to P6. Added NCL definition. Rewrite of 2.4.1 to remove project MRB requirements in favor of NCR/CA system use. 2.5.1, expanded to address ISO requirement. 2.5.5, added to address ISO requirement. References to "MRB" changed to either "NCL" or "NCR/CA system" as appropriate. NCR Form instruction 1 revised. Added GSFC sponsor as alternate to Contracting Officer where no CO exists (Records table 2.4.1, 2.5.1, 2.5.2, 2.5.5).
C	06/23/99	- Added P4 (f) and modified 2.5.4. - Incorporated changes to accommodate minor and major nonconformance handling distinctions: - P6 second row added; expanded 1(a); - revised 1(e); - 2.1 modified to allow temporary use of facsimile nonconformance tags; - revised 2.2 for minor nonconformances; - 2.3 - "tangible" added before "nonconforming product" to exclude non-tangible products from mandatory segregation; - 2.4.1 expanded to include general definition of major product nonconformance and requiring procedure/instruction for local nonconforming product control processes; where warranted changed "NCR" throughout GPG to more generic terms not associated strictly with the NCR/CA database; - removed NCR form attachment
D	08/17/99	Definition of Major nonconformance (1.a) amended to replace the word "anomalies" with "failures" in the first sentence. 2.4.1, modified to make clear that local procedures are necessary for application of both the NCR/CA system and any local alternate process for minor nonconformances.

E	03/02/00	Definition of Major nonconformance (1.a) modified to address personnel and system safety and bring definition in line with GPG 1710.1.
F	05/16/00	- Deleted allowance for local documentation (vs. NCR/CA system) of minor nonconformances. This change affected P6, 2.2, and 2.4.1. - P4 - Deleted references to GPG's 5100.1, 5100.2 and 7120.2 - P6 - Changed title to QUALITY RECORDS - 2.1 - Inserted GSFC Form number for red tag. - 2.4.1 - Second sentence: Replaced "Project procedure(s) and/or work instruction(s)" with "Project document(s)". - 2.6 - Inserted "(or the organization's designee)"
G	01/17/03	Reformatted using latest GPG template to comply with GPG 1410.1. P.4 - Added FAR Part 46 reference. P.8 - "Quality" removed from section title P.10a.1 - Revised definition of major nonconformance. P.10c - Individual disposition definitions removed. Text expanded in 4.3. 2 - First sentence revised to include an exception for minor software nonconformance documentation. 4.1d - Control plan contents requirements reworded. 4.3.a through f – Elaboration of nonconforming product dispositions 4.4 - New section added to address ISO 9001:2000 requirement. 5.1 - Deleted Contracting Officer and/or customer sponsor involvement in customer disposition approval requests. 7 - Rewritten. Flowchart updated consistent with text changes.
H	07/30/03	Procedure re-written to address deployment of PR/PFR database, distinguishing product problems from systemic issues. Substantive changes: - All references to "NCR/CA" changed to "NCR/CAS". - P.3 - Authority document updated. - P.4 - References j (GSFC 4-31) and l (FAR Part 46) deleted. - P.7 - Training source updated. - P.8 – First record custodian updated. - P.10 – Definitions added for "Anomaly", "Corrective Action", "Disposition", "PDL", "PR/PFR database", and "SOARS". Nonconformance definition revised to remove "major" and "minor" distinctions. - Section 2. – Added first paragraph. Incorporated 5.3 and 5.4 of Rev. G into last paragraph. Rest of section re-written to incorporate PR/PFR and SOARS documentation. - 4.1 – Replaced NCR/CA with PR/PFR. - 4.3 – Last sentence revised to remove reference to root cause analysis and correction for major nonconformances. - 4.4 – Second sentence added.

		- 5.3 – Previous NCL responsibility assigned to PDL. - 7. – Re-written to address PR/PFR closure and to remove reference to major nonconformance reports.
I	01/10/05	Changes made to update organization and document references and/or distinguish requirements from recommendations in accordance with the NASA rules update mandate.
I	09/03/08	Administratively extended through July 30, 2009.
I	07/27/09	Administratively extended through July 30, 2010.
I	03/30/10	Administratively extended through July 30, 2011.
J	11/15/11	Complete rewrite of GPR 5340.2I; Modifications made from GID 5340.2 (overriding GPR 5340.2I) are as follows: Updated section P.2 to reflect GPR 1280.1; updated section P.3 to reflect GID 8730.1; updated P.4 to reflect necessary references; updated P.5 to reflect cancelation of GID 5340.2; updated P.8, elaborating the retention criteria; updated P.9 with necessary requirements/references; updated format of "Procedures"; added requirement stated in 4.b; updated definitions for NCL.
K	04/09/13	NOTE: Plenary modification was the merger of GPR 1710.1 into 5340.2 in order to cancel 1710.1; Title: Modified to include "documentation"; Purpose: inclusion of "CAPA"; Authorities: inclusion of NPD, GPD; Applicable Docs: inclusion of 5100.4, 5330.1, 5340.4; removal of 1710.1 and 5340.2J; updated P.5 to reflect cancellation of 1710.1; P.9: modified to include 5100.4, 1060.3; removed 1710.1; Procedures: 1, inclusion of CAPA; 2.d, removal of 1710. & replaced with Fig. 1 & 2; 3.c, added Root Cause training; 4., added SMA-002-10 Root Cause Analysis; removed 1710.1 and replaced w/Fig. 1 & 2; Appendix: added Cause, Int. Cause, NCR Coordinator, Nonconformance Report, Prox. Cause, Root Cause, RCA; Figures 1 &2: adjusted per comments/dispositions; Fig. 2: added "NOTE"; Acronyms: modified as necessary